

THE
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXI.

THURSDAY, DECEMBER 8, 1864.

No. 19.

HERNIA CASES TREATED AT THE BOSTON CITY HOSPITAL,

BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

CASE I.—*Congenital Inguinal Hernia; Operation for a Radical Cure.*—Michael S., æt. 7. Three weeks after birth, mother noticed a swelling in right inguinal region. Whenever the child exercised, the rupture descended into the scrotum, producing severe abdominal pain, and rendering the patient helpless. A truss had been worn without benefiting the hernia, as regards a cure. A younger brother is also suffering from hernia of the same side. Parents are not ruptured, and are robust, laboring people. On Sept. 16th, the child was admitted to the City Hospital for an operation. The bowels were thoroughly cleared with castor oil.

Sept. 17th.—It was thought best to operate by the simplest form of Wood's operation, because the ring was small and the hernial sac did not project far. The patient having been etherized, a vertical incision was made in the scrotum from over the external ring down to the testicle, and the skin dissected up on either side. The little finger of the right hand invaginating the scrotal fascia into the ring, and the cord being beneath it, the hernia needle was passed up above the finger, and made to pierce the inner pillar and conjoined tendon, and brought out through the skin, which was drawn inward by an assistant. One end of a piece of copper wire (No. 20), silvered, was now hooked on, withdrawn through the wound in the scrotum, and the needle unthreaded. Next, the needle was passed up outside the finger, curved under the outer pillar, passed through it, and made to emerge at the same puncture in the skin of the abdomen. The other end of the wire was now hooked on and withdrawn. The loop above and the two ends below were now firmly twisted, thus approximating the pillars together. The end of the wire was now passed through the loop, over a roller, and firmly clamped. A spica bandage was then applied over all. The patient was put to bed, with the knees raised by a pillow.

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The next day there was very little fever; a slight redness over the scrotum. On the third day, the bowels moved spontaneously; the wound had begun to suppurate. On the fourth day there was a little tenderness over the abdomen. The right testicle was red and painful. Very little suppuration. Testicle supported. Water dressing. On the fifth day the roller was removed, because the wires were beginning to cut through the skin. The ends were left loose, but not untwisted. Testicle continues a little swollen. On the seventh day the tenderness over the abdomen had disappeared. Patient jumped out of bed in the night, on an alarm of fire.

On the fourteenth day the wires were removed. There is a large, firm cylinder of induration filling the inguinal canal from end to end, and tapering off as it reaches the internal ring. Testicle well. No pain or tenderness.

Oct. 7th, three weeks after operation, wounds entirely healed. May have his clothes, and walk about the room. No truss applied. Hernia does not come down. The patient was discharged from the hospital, but returned to report himself, seven weeks after the operation. No external ring could be felt. The hernia had not come down, and the canal remained filled with lymph. He will continue to remain under occasional observation.

CASE II.—*Inguinal Hernia of two and a half Years' duration; Operation for a Radical Cure.*—John F., æt. 9. Two years and a half since, as a consequence of a fall, he complained of pain in the right inguinal region, and the mother noticed a swelling there. A truss was applied and continued until worn out, without curing the rupture. Now, Oct. 3d, the right external ring will admit the little finger with ease, and the hernia descends on motion or coughing. Parents desire an operation.

Oct. 5th.—He was operated on precisely as the former case, and it is needless to repeat the various steps of the operation here. On the second day he had a natural operation from the bowels, and no tenderness over the abdomen. On the third day suppuration began, and there was slight redness over the inguinal region. On the ninth day the roller was removed. The wound was suppurating freely. The inguinal canal filled with hardened tissue. Constitutional state good. On the fourteenth day the wires were removed. Through some inadvertence he was left in bed somewhat longer than necessary after the wounds were healed, but on the twenty-sixth day got up and walked about, without a truss, and with no appearance of the rupture. The canal was apparently firmly blocked, and the ring effaced. He was last seen four weeks after the operation, well, and without any truss being applied. He will report occasionally.

Although it is too early to determine positively the final success of these operations, as in the case of those reported last summer in this JOURNAL, when from four to six months had elapsed, yet these two cases seem to prove—

1st, That Wood's operation for the radical cure of hernia is a safe one to perform on young children.

2d. That it gives in them great promise of success, because the tendency of Nature is probably to close the rings, as the child grows; yet that Nature unaided almost never does succeed, and when aided by a truss only occasionally does so. This operation therefore affords in children a safe and ready means of favoring a natural cure—if nothing more—far superior to a truss, which latter is not only uncertain, but often difficult to be fitted and worn by a young person, without excoriation, and without the rupture slipping down past the pad, when it does more harm than good. Whether or not the operation stands the test of time when done on adults—and we see no reason to doubt Mr. Wood's statistics—we can certainly advise it as easy, safe and effective in children.

CASE III.—*Strangulated Femoral Hernia; Operation; Recovery.*—Mrs. Bridget C., æt. 42, has had hernia for five years, at first causing no inconvenience, but latterly subject to occasional strangulation, as often as once a month, but from which she generally recovered in a couple of hours. Hernia always remains down, she says. Yesterday P.M. was suddenly seized with vomiting and pain, which has continued. No dejection since the strangulation, but previously a diarrhoea.

Aug. 31st.—She was brought to the Hospital about 6, P.M., in a very feeble condition, the hernia having been strangulated twenty-four hours. Pulse weak; skin cool and clammy; retching, and constant dragging pains in abdomen, and a countenance indicative of great distress. On examination, an oblong, elastic tumor, as large as a hen's egg, was found in the left groin, below Poupart's ligament, and was diagnosed as a femoral hernia. Having been etherized, an attempt was made to reduce by taxis, without avail, and similar attempts had been made before admission. Her pulse fell off, and it became necessary to give brandy and ammonia. After she had rallied, she was again put under ether, and the operation commenced by a straight incision through the skin, from just below the spine of the pubes, downwards and outwards. The coverings were very thin, and the sac was soon exposed. A hernia knife was now passed on the finger down to the crural canal, and Gimbernat's ligament divided upwards and inwards. The finger now freely passed beneath the crural arch into the cavity of the pelvis; but the hernia did not yield. The intestine could be felt above Poupart's ligament, evidently continuous with that in the sac, but encircled by a rigid band. This was evidently the falciform border of the saphenous opening in the fascia lata, and the seat of the stricture. A director was insinuated between this and the sac, and the stricture divided. Immediately the vermicular motion of the strangulated bowel began to return; the sac collapsed, and was easily replaced within the abdomen, without having been opened. A graduated compress, wet with cold water, and spica

bandage were applied, and one grain of opium given; to be repeated in four hours, if needed. Beef-tea, and stimulants if required.

Sept. 1st.—Has had three dejections. Slept well. No pain in bowels; a little soreness on pressure. Pulse quiet. Tongue clean. Aspect much improved. Continue cold-water dressings. Gruel and tea, and a moderate amount of beef-tea.

2d.—Comfortable night. One dejection, with some pain. A little tenderness over abdomen. Pulse 80. Tongue clean.

3d, 4th, 5th.—Continues to improve. Wound granulating.

Not an unpleasant symptom supervened. As soon as the cicatrix of the incision would bear a truss, one was applied, and she was discharged, well.

CASE IV.—*Strangulated Femoral Hernia; Operation; Death.*—

Mrs. Susan H., æt. 40. One year ago violently strained herself, and produced rupture on the left side. It was readily reduced by a physician. Since then it has come down occasionally, and been returned. [As she has never worn a truss, and the sac was incarcerated, the latter has probably been down all the time.] The patient was first seen, in consultation, at 2, P.M., Nov. 11, and was found to have had the hernia down since 5, A.M. Repeated and forcible attempts at reduction by taxis had been made. There had been vomiting and colicky pains all day. After a moderate renewal of the taxis without avail, it was advised that she be removed to the Hospital and etherized. She was carried there about 5, P.M. The countenance was anxious, flushed and excited, the pulse quick; vomiting and pains continue. A tumor, as large as a hen's egg below, and above rolled out over the *fascia lata* and Poupart's ligament, occupied the left femoral region. It was firmly fixed, with very thin walls, prominent and somewhat livid. Drs. Stedman and Buckingham saw her in consultation, and concurred with me in thinking that the tumor would not bear much more taxis, and that an operation was imperative. The patient having been etherized, gentle efforts at reduction were made in vain. A long incision was made over the tumor, the superficial layers dissected through, and attempts made at reduction without opening the sac. But although both the crural ring and the *fascia lata* were freely incised, the sac could not be reduced, and it was found to be adherent to the sides of the crural canal. The sac was now freely slit open, when considerable serum was found, and a knuckle of small intestine, which for the space of an inch and a half was quite dark colored, not absolutely black, but a very dark brown. Even now no vermicular motion was set up, and it was only by drawing down the bowel above, and tucking it up from beneath with the finger of the other hand, that it eventually could be returned within the abdomen. The sac could not be replaced. A graduated compress and water-dressing were applied, and one third of a grain of morphine given, to be repeated if required.

Nov. 12th.—She looked pretty well. Slept a little. Pulse 112. Tongue moist. Some vomiting continues. Has had no motion from the bowels, but some tenesmus. Complains of thirst. Urine drawn off. Small amount of beef-tea ordered. Citric acid drink and half grain pills of solid opium.

13th.—Not so well. Tenesmus has continued, until finally checked by laudanum and starch injections. Vomiting. Distress. Pulse 120. A moderate tympanites; but little pain or tenderness over bowels. Opiate treatment continued.

14th.—Looks worse. Pulse more feeble. Profuse sweats. Abdomen pretty well distended, and more tender. Tenesmus. Vomiting of a dark fluid. Countenance anxious. A red blush extending from site of operation for several inches upwards and outwards.

15th.—Fourth day since operation. Symptoms all worse. Sinking. Pulse 150, and fluttering. Vomiting and tenesmus continue. Died at 3.30, P.M.

These two cases present certain points of contrast not without interest. Neither had worn a truss. Yet in the patient with hernia five years, the sac was free, while in her who had been ruptured but one year it was incarcerated. The patient who died was a much stronger and more healthy woman than the one who recovered, and her strangulation had existed only twelve hours, while in the other it had lasted for twenty-four hours; yet in the latter the rupture, returned without opening the sac, had done perfectly well, showing that the intestine speedily recovered its circulation, while in the former the bowel was found dark, congested, almost mortified within the sac. In this patient attempts at reduction by taxis had been made more forcibly, and longer continued than in the other. Are we not, then, justified in concluding:—

1st. That very moderate and gentle taxis under ether will do all that can be done towards reduction; and that taxis may do more harm, if long continued, than strangulation for an equal time.

2d. That the operation is far less dangerous than prolonged taxis, particularly if the rupture can be returned without opening the sac.

3d. That we cannot form any judgment as to whether the sac is *incarcerated and irreducible*, either from the statements of the patient, the length of time the rupture has existed—provided no truss has been worn—or the appearance of the hernia itself.

But that we should operate early; avoid opening the sac if we can, but not hesitate to do so if the whole sac cannot be readily and gently reduced after the stricture is divided; bearing in mind that simulated reduction where the whole mass may be pushed into the areolar tissue, external to the abdomen.

Much of this is but truism, we are aware. Yet it would seem that there are certain cardinal rules of treatment in such an emergency as strangulated hernia, which cannot be too often reiterated.

ILLUSTRATION OF SOME SURGICAL PHENOMENA BY THE
THEORY OF PROJECTILES.

BY E. C. BIDWELL, SURGEON 31ST MASS. VOLS.

[Communicated for the Boston Medical and Surgical Journal.]

I SUPPOSE that every missile projected from the mouth of a firearm, of whatever kind or calibre, has, in addition to its projectile motion, a motion of rotation upon an axis of its own. If this rotary motion be not the purposed result of the construction of the weapon, it is acquired from accidental causes, which may operate upon the missile at its start or during its flight. Any defect in the gun, or even a slight inequality in the shot, may cause it. Indeed, it is the design of the spiral groove which is introduced into most modern arms, large and small, to give the shot a rotation upon an axis corresponding to the line of traject, thereby to forestall the accidental rotation, which is more likely to be in some other direction, and tends to deflect it from its intended course. This rests upon a manifestation of the physical property of inertia, by which a body in rotation tends to continue to rotate in the same direction, unchanged by any motions that may be impressed upon it as a whole. In other words, the direction of its axis continues parallel to that with which it commences, so long as the rotation continues. This principle is illustrated in the familiar toy, the top, in the spinning plates of the mountebank, and in the revolutions of the heavenly bodies. Now, as the line of flight is always a curve, the axis of rotation ceases to correspond exactly with that line the moment the flight commences. With every succeeding instant the one departs from the other more and more widely. A conical ball from a rifled gun must therefore impinge obliquely by its rotating side, and the more so as the gun is more elevated for long range. That is the theoretical result. I presume that in artillery it is the actual result also. It is said to have had a curious exemplification in the case of the percussion shells sent into Charleston by the Swamp Batteries, which failed to explode because they did not impinge by their apices. In the case of small arms it is found that the designed rotation is often merged in that which proceeds from accidental causes. The impressions upon conical leaden balls picked up on battle-fields, and their positions in various lodging places, prove that they impinge in all directions, and scarcely more frequently by the apex of the cone than by any other part. The acquired rotation of round shot is probably always upon an axis perpendicular, or nearly so, to their projectile direction.

This rotation of round musket balls is probably an important element in determining the erratic course which such balls sometimes take in the body. For it is evident that a ball in rapid rotation entering a medium in which it meets with considerable resistance, will most easily overcome that resistance on that side of which the sur-

face motion is towards the resisting medium, because on that side the force of rotation is added to that of projection, and on the other side is so much deducted from the same force. It will consequently be deflected towards the side of least resultant force. It is well enough to remember that the rotary motion, meeting less resistance than projectile motion from the air, and none from gravity, may continue rapid and even violent after the latter is nearly or quite spent.

Another way in which the rotary motion of projectiles may modify surgical results, is found in the occasional violence of spent cannon balls. A round ball may be moving slowly along the ground, apparently just ready to stop. A careless observer puts his foot against it, and receives an injury which may be fatal to the member. It has been suggested in explanation of such cases, that the velocity was really much greater than it seemed; but if it were possible to note its progress and direction within such limits of distance that one could put himself in the way of it, its velocity must really have been very moderate. Others have referred to the great momentum which the missile *had*, as if momentum was not exactly proportionate to the velocity, and exhausted when motion ceases. But it is possible for a cannon ball, as for a billiard ball, or a marble, to have a rapid rotary motion after its projectile motion has ceased, sufficient to make it a dangerous neighbor. In that condition anything not capable of greater resistance than the human body, brought into forcible apposition with it, would inevitably suffer violence, precisely as it would if brought into like contact with machinery in like rapid and irresistible motion.

The same principle comes in to modify the injury in oblique impingement by cannon balls. If the rotation is such that on the side impinging the surface is moving forward, or in approximately the same direction as the projectile motion, a laceration results, co-extensive with its touch. The revolving surface moving with the velocity of rotation added to that of projection, *by friction* tears its way through the tissues as in the case already cited. If the rotation be in the contrary direction, so that the rotary motion of the impinging surface in a measure offsets or counterbalances the projectile motion, as in the case of a cannon ball simply rolling over a part, its surface friction may be so slight as to leave the skin unbroken, even unabraded, at the same that the projectile momentum is sufficient to crush and comminute the parts beneath it to a fatal degree. Of this kind are the cases in which persons are supposed to be knocked down or killed by the "wind" of a cannon ball—an idea which is sufficiently refuted by the fact that shot not only come very near, but into actual collision, carrying away a hat or an arm, without any such stunning or destructive "wind."

It is indisputable that injuries from cannon shot are met with, of these two kinds, in one of which there is profound lesion, with little or no external indication; and in the other frightful laceration, dis-

playing at a glance the full extent of the injury, yet altogether, perhaps, a much less grave injury than the other. That the rotary motion which these projectiles have is sufficient cause to account for the difference of effects, is demonstrable on the principle of mechanics. It is not unimportant to know that something more than mere inexplicable caprice governs movements and determines results, here as elsewhere; that effects follow causes, even in the erratic movements of the missiles of warlike engines.

A CASE OF CHRONIC GLAUCOMA. IRIDECTOMY.

BY GUSTAVUS HAY, M.D., BOSTON.

[Communicated for the Boston Medical and Surgical Journal.]

Mr. C., æt. 70, American, carpenter, came to the Infirmary April 23, 1863. His sight had been failing for eight years. The right eye read with difficulty at 20 feet Dyer's upper line (adapted for a hundred feet) and a letter of the next line; the left eye read only the upper line. In the absence of any note on the subject, we suppose the above sight was with the unaided eye, without any glass. In each eye the field of vision was diminished and the tension increased. The ophthalmoscope showed in each the characteristic deviation of the retinal vessels at the periphery of the nerve, a little less marked in the right eye. There had been no pain, and, we think, no inflammation. There was no inflammation at the time.

April 26th.—Iridectomy was done on the right eye.

May 4th.—The blood nearly if not quite disappeared from the anterior chamber.

About May 18th.—Patient discharged. Vision apparently not improved. Acuteness of vision not quite as much as before the operation. The ophthalmoscope showed the media to be clear and no retinal extravasations.

July 30th.—Sight certainly not diminished. With a convex glass of 40 inches focal distance the eye operated on reads at 20 feet the two upper lines of Dyer's.

1864, Nov. 14th.—The eye, with the same glass, reads the three upper lines of Dyer's at 20 feet. The other eye, though at the time of the operation nearly as good as the right, now with difficulty sees at 20 feet the card on which the letters are printed.

In cases of chronic glaucoma unaccompanied by pain and inflammation, the advantage of iridectomy is not so striking as in acute inflammatory cases. We generally say to the patient, in the former class of cases, that by means of the operation the sight will diminish less rapidly than it otherwise would, and the above case seems to confirm this view; for at the end of eighteen months the eye operated on has lost, if anything, certainly very much less than the one not operated on.

LIGATURE OF THE COMMON CAROTID ARTERY. DEATH.

BY WM. B. REYNOLDS, SURG. 2D U. S. SHARPSHOOTERS.

[Communicated for the Boston Medical and Surgical Journal.]

FIRST Lieut. Wm. Fisher, 99th Penn. Vols., was admitted to Hospital, Oct. 9th, 1864, having received a gun-shot wound, the ball entering two and one half inches behind the symphysis of the inferior maxillary bone of the left side, and lodging just under the skin, close to the cervical vertebræ on the same side. He had bled very profusely, and from the time of his reception until death, was unable to articulate, leading me to believe that the pneumogastric nerve was severed or injured. I plugged the several openings, but could not control the hæmorrhage, and proceeded to operate. In the usual way, I tied the common carotid artery, without administering chloroform, the patient evincing little pain, and secured the artery below the omo-hyoid muscle. There was no mental disturbance. His mind was clear. He died twenty-six hours after the operation, reaction never having been re-established, notwithstanding that essence of beef and brandy had been freely administered.

I tied the artery low down for the reason that the condition of the parts required it, as they were much swelled and very tense from effused blood.

LETTER FROM PHILADELPHIA.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—But a short time ago, I wrote the announcement of the successor to Dr. Wm. Pepper, and now I am called upon to record his death. He died in harness, literally worked to utter exhaustion, though consumption has the merit of having caused the gap in our circle. Prof. Pepper was beloved, admired and respected by all with whom he came in contact. Though not eminent as a teacher, his ill health preventing his being heard beyond the first few benches, yet his views were sound, and found many disciples.

Medically, we are doing nothing now; the schools are going on as usual, the quizzers are quizzing, the embryo doctors are being sharpened to the proper point for the *green room*, the societies are meeting monthly and sometimes oftener, there is comparatively little sickness, not even the "spotted fever" which scourged us last winter, we are rapidly recovering from the terrible election mania, and, as I said before, there is nothing new. Stop! We have struck oil. That is, as a profession. It is astonishing to what an extent the profession are going into oil stocks. They speculate in oil, think and drink oil, prescribe oil, and—what do you think of the following:—R. 100 Walnut Island, a 5½ b. 30. M. It is a fact. At all the meetings, clubs, everywhere, it is oil! oil!! oil!!! One quite

prominent M.D. is said to have made \$15,000 in a few weeks. I am afraid, at this rate, the fees will be so lubricated that they will slip out of our hands faster than *in*, and the poor patients will slip through our fingers into the hands of the undertaker.

You may prepare to be taken by storm next June, as, from present indications, a large number of our physicians will attend the next session of the American Medical Association, in Boston. It is most earnestly to be hoped that the almost numberless committeemen will attend to their duties, and come fully prepared with valuable reports, and not with excuses for work not performed. What a vast work could be done, did our brethren view this Association in the proper light, and not as a mere pretence for feasting and sight-seeing.

Yours, &c.

N.

Philadelphia, November 28th, 1864.

ON THE INSPIRATION OF VAPOR IN CERTAIN LESIONS OF THE BREATHING APPARATUS.

By JOHN HUNTER, M.A.

WITHOUT laying claim to any great originality, I trust that the few observations I have to make upon this important subject, to which I have directed considerable attention, may be worthy of notice by the profession.

I suppose no one will deny that, as a general principle, the use of moisture in combination with air is of service in chest diseases. This we see daily evidenced by the beneficial effect of sea-air—which contains vapor in excess of the amount held by the air generally—in the different forms of bronchitis, &c. But it is to insist on the powerful remedial agent which we possess in vapor when judiciously used at the bedside of the patient that is the object of the present paper. On the first appearance of an attack of, say, simple bronchitis, the first symptom observed by the patient is a feeling of oppression in breathing, “a tight feeling across the chest.” This is caused by the proper secretion of the lining membrane of the lungs being partially arrested. The air-cells are in an equal degree incapable of performing their proper functions—namely, the reception of oxygen from the inspired air, and the giving out of carbonic acid gas; the result of which is that the patient has a diminished area of breathing-surface, in proportion to the intensity of the attack. And here I may remark, in passing, that there is an evident necessity in such a case that the patient should have the purest air procurable, to make some amends for the deficient quantity. Now in this stage of the bronchitis I believe we have no such powerful agent as steam, properly applied. The precise mode of application may be varied to suit different attacks in patients of different ages, and other peculiarities; the great principle being that the steam should be car-

ried with the inspired air into the air-cells, where it not only acts as a substitute for the natural mucous secretion, but by its soothing action disposes the membrane to resume its normal functions. I have seen an attack of acute bronchitis cut short by these means, almost without any other; while in the different forms of asthma it is found of the greatest service. I put the acute bronchitis first in the list, as I think that it yields to the power of steam more easily than any other form of chest-disease; but it is good in all. And even in chronic bronchitis it is of the greatest service in softening the glutinous sputa, and rendering it much more easy to be got up by the patient, thereby saving time and many coughs, the patient being enabled to get up all his expectoration at the beginning of the night, and thus start, as it were, with a fresh account, instead of being tormented by the small instalments frequently due. In phthisis, also, I have found the breathing-in of steam to be of the greatest service in the frequent though often slight attacks of localized congestion, which denote that the disease is placing its grasp upon another portion of the lung; such attacks, if not altogether warded off, being certainly modified in their intensity. I could now give details of many cases in which phthisis appeared to be kept in subjection, each exacerbation of the disease being speedily met and apparently crushed; but I must proceed to give details of the mode of application of the steam. This varies in different patients.

In the case of infants, where the simplest means must be used, I have found nothing to succeed so well as placing a flat and broad vessel at each side of the cot in which the little patient is; these should be kept filled by the nurse with hot water, and the steam from them is caused to ascend and float round the little sufferer, who unconsciously inspires the beneficial vapor. In patients of more mature age the steam may be applied by an ordinary teapot, which being *half* filled with boiling water, and the mouth applied to the spout, the patient may be taught to draw in the steam with his inspirations. At first it may give rise to a little irritation of the mucous membrane, but the patient quickly feels the beneficial effect, and generally perseveres in its use. It is a good plan to put some tea, cinnamon, &c., at the bottom of the teapot, which prevents the insipid taste of the steam from being disagreeable to the patient. I lately had a patient, an overlooker in a cotton factory, who was suffering from chronic irritation of the lungs, evidently arising from the small particles of cotton floating with the inspired air into his air-cells, and there giving rise to his sufferings. I explained to him the action of steam in his case, and he, being of an ingenious turn, put a piece of elastic tubing, about four feet long, to the spout of the kettle, and after his day's work, regularly sat by his fire inhaling the steam, and in about half an hour was able to get up all the cotton taken in during the day, thereby ensuring a comfortable night's rest, which had been before impossible from cough. Steam may be ap-

plied in this way: a small perforation is made in the lid of a common kettle, into which may be soldered a short tin tube bent up at a right angle; attached to this may be a tube of vulcanized india-rubber, of any reasonable length, which may reach over to the bedside of the patient, and, opening out near the patient's mouth, may during the night keep the air inspired hot and moist. The whole expense of this apparatus is only a few shillings. This plan is adapted for night-work, as the kettle, if filled at bed-time, will furnish steam sufficiently during the whole night. Many other plans may be adopted, and no doubt will occur to the ready mind, but the great object to be attained is to keep the air inspired warm and moist as a powerful curative agent, being one particularly useful in this climate, where diseases of the chest are so common.--*Lon. Lan.*

ASSIMILATION OF ISOMORPHOUS SUBSTANCES.

E. ROUSSIN has performed a series of experiments on hens and rabbits, in order to ascertain whether similarity in form and composition is accompanied by any peculiar physiological properties. In one series of experiments, he investigated this question with regard to the shell of the hen's egg. This contains 90 per cent. of carbonate of lime; and he endeavored to ascertain whether other isomorphous carbonates could be made to replace the lime-salt in the shell. Accordingly, some hens, some time before laying, were shut up in wooden cages, at a distance from the ground and from any wall, and were fed with potatoes and oatmeal, or with oatmeal moistened with water. With their food, the substances with which the experiments were made were mingled. The result of these experiments was, that carbonates of baryta, strontia and magnesia, peroxide of manganese, protoxides of iron, zinc, copper, lead, cobalt, or the oxides of these metals, were readily assimilated by the hens and eliminated in the coverings of their eggs. Alumina, sesquioxide of iron, manganese, and the oxides of antimony, were never found in the egg-shell.

Another series of experiments had relation to the soft parts of the egg. The albumen and yolk yield, on calcination, a notable proportion of chloride of sodium. As the alkaline iodides, bromides and fluorides are isomorphous with this salt, it was endeavored to ascertain whether, after their administration, iodine, bromine, or fluorine would be found in the egg. Not only was this the case, but the quantity of these elements present in the egg was remarkably large. They were apparently distributed in equal proportions between the albumen and the yolk. Eggs containing bromine, iodine or fluorine, have no peculiarity of taste; and it is suggested that this observation may be made useful for therapeutic purposes.

The administration of the alkaline iodides, and especially of the

bromides, was accompanied by a singular phenomenon, viz., the gradual disappearance, in some instances, of the calcareous covering, in proportion to the increase of the above-named substances in the interior of the egg. This occurred in hens left at liberty, and having free access to carbonate of lime; and was not generally observed in strong birds with good appetite.

In a third series of experiments, it was endeavored to ascertain whether arseniate of lime could be assimilated and substituted for phosphate of lime in the bones—the arseniates being isomorphous with the phosphates. The result was found to be that, when small quantities of arseniate of lime are introduced into the food of a female rabbit, the animal gives birth to young whose bony skeleton contains a notable proportion of arsenic, while their muscular tissue contains scarcely any traces. The arsenical compound is also eliminated by the urine in the form of arseniate of ammonia and magnesia.

M. Roussin concludes, from his experiments, that substances isomorphous chemically are assimilated and eliminated in a like manner from the animal economy, and may be regarded as isomorphous in a physiological point of view.—*Ohio Med. and Surg. Journal*, from *Gaz. Méd. de Paris*, and *British Medical Journal*.

ON THE EMPLOYMENT OF BENZINE IN TRICHINIASIS.

BY PROFESSOR MOSLER.

In his late work on intestinal worms (*Helminthologische Studien und Beobachtungen*, Berlin, 1864), Professor Mosler directed attention to the poisonous influence which benzine exerts upon trichinæ in the intestinal canal, and he further narrated an experiment which seemed to show that the trichinæ in the muscles did not perhaps altogether escape from the action of this substance. A pig which had been infected with trichinæ was treated during four weeks with increasing doses of benzine. It then died. The trichinæ with which its muscles were crowded had a peculiar appearance, and showed no movements even when the temperature of the flap in which they were placed was laid. A rabbit fed by Dr. Mosler with the flesh of the animal died in eight days, and only presented intestinal trichinæ in small number. Dr. Leuckart sent a certain quantity of the same flesh to three of his friends, who administered it to a series of rabbits. The experiment failed completely in all these animals except one, in which, after great trouble, a single trichina was found. It seemed from these results that benzine had killed the immense majority of the trichinæ in the muscles of the pig. But it was believed that the pig had been poisoned by the benzine, and hence it was not to be expected that this substance could be used successfully to combat trichiniasis in man. Later experiments have, however, proved

to Dr. Mosler that larger doses than he had given in this case can be supported with impunity; the death of the pig had been caused by a pneumonia, which had been occasioned by the accidental penetration of benzine into the air-passages, the result of a faulty mode of administration. It was thought a very interesting question to determine if benzine in large doses could be borne by the human economy in the febrile condition which exists at the commencement of trichiniasis. Dr. Mosler had an opportunity of studying the question on a large scale during the alarming epidemic of trichiniasis which desolated Quedlinburg at the beginning of the present year. He went there on the 20th of March, and the treatment by benzine was immediately put in force by himself and the resident physicians. At first it was given in capsules of gelatine, but this method was soon given up as expensive and troublesome. The following mixture was usually given: benzine, two drachms; liquorice juice, mucilage of gumarabic, of each an ounce; peppermint water, four ounces. A tablespoonful every one or two hours, the bottle having first been well shaken. In this form benzine was easily taken and well borne. Many of the patients stated that under this treatment they soon felt better, and that the pain in the limbs was relieved. The largest doses were given by Dr. Rudolff, who gave as much as two drachms daily, and this was continued for from four to six days. Dr. Mosler had the opportunity of satisfying himself that in none of the patients, even in those in whom the fever was high, did any bad effects show themselves; in particular, there was no appearance of nervous or pulmonary affections, which are so often observed when benzine is administered to rabbits. Dr. Mosler undertook a fresh series of comparative experiments upon pigs, putting himself as far as possible in the same position as a physician would be, both as to the doses of the remedy and as to the time when the treatment was commenced; that is to say, commencing a week after the injection of the trichinae, a period at which trichiniasis can be diagnosed in man. The following are the conclusions to which Dr. Mosler has been led by his observations and experiments:—That benzine, which holds the first place among all anthelmintic remedies, may be administered to man without bad effect in larger doses than was formerly thought possible: That, given in doses which the human organism can tolerate perfectly, it kills with certainty trichinae in the intestinal canal, and so prevents the emigration of the embryos; and that therefore benzine is the only rational treatment to be employed in the trichina disease of man.—*Edinburgh Med. Journal*, from *Berliner klinische Wochenschrift*, No. 32, 1864.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON: THURSDAY, DECEMBER 8, 1864.

THE LONDON LANCET.—In one of the late numbers of *Punch* there is a black and horrible picture, one that will not be easily forgotten, representing a huge cannon driven into an abyss by the Furies, and crushing in its descent beneath its ponderous and sharply-spiked wheels both the armies of the Republic and those in rebellion against her. Just in its path is the tattered flag of our country, bearing but seventeen stars. It is called the American Juggernaut. The artist has done his work well, for he is always particularly clever in his cannon. We remember, not many years ago, another large cartoon of his, in which there was a whole battery of them. Behind them was planted the red cross of England, in front and lashed to their muzzles a host of captive Sepoys, and in the foreground another butchery upon which native wives and orphans are made to look, pleading in vain for mercy. That picture was called Justice. To all this we have not one word to say. We accept it as a truthful index of the sentiments and wishes of the ruling classes of Great Britain. As Americans, we have our own feelings, but we had never supposed that the pages of a medical journal was the proper place for their expression. We had held them to be devoted rather to the cultivation of a Christian Art, which looks upon all men as brothers, and to science, which should know no geographical boundaries.

The London *Lancet* has a different ideal, it seems. It has more than once published statements respecting the treatment of our sick and wounded, which it knew must be false, and which it has never been just enough to contradict, and has not lost an opportunity of expressing ill-will whenever it saw the slightest pretext not absolutely disconnected with medicine. But now it has overstepped even this flimsy veil of professional decency, and, finding no longer any grounds for defamation in our military surgery and Sanitary and Christian Commissions, comes boldly out in as malignant abuse as the *Times* itself. Not wholly trusting in its own powers, however, it calls to its aid one of the most scurrilous papers in London, and in a recent leader quotes at length and approves the following vulgarity of a special correspondent. We will not soil our pages by repeating the whole of the article in question; enough is given, however, to show how noble it holds the purpose for which we are fighting, and how far out of its way it has gone to perpetuate and stamp its approval of the picture we have alluded to. We cannot believe that the profession of England can sanction such prostitution of medical journalism.

"The gross-feeding and unwholesome look of the teetotaller in England is to be ascribed to a ghoulish craving for heavy meat teas, greasy muffins, sally-lunns, and hot suppers; but in the United States to an overweening addictedness to pie. American ministers of the gospel gorge on pie 'till the *odium theologicum* rises in their throats, and they must curse their brethren or choke. Full of pride and pie, they wax bloated, and kick at their apostolic mission. Plethoric with

pie, they bellow forth denunciations from their pulpits and roar for blood. There is nothing open and above-board in pie. It can be eaten stealthily and in secret. A slice of a cut pie is never missed. I have heard of young ladies who took pie to bed with them.' Orators are not referred to, but it may be surmised that the most celebrated living American speech-maker and lecturer was cultivated on pie. Of this popular orator a lukewarm admirer recently said—'It isn't what he says, but the way in which he says it, that takes away your breath. He'd tickle a tortoise into good manners, I guess. He doesn't worry a man by giving him too much to think about, and yet somehow or other he never sits down without *having made you wish to put a bullet into somebody.*'

"The Confessions of a Pie-Eater have lately been published. They are heartrending. All the miseries of infancy, childhood, youth, and manhood, arose from an ungovernable lust for pie. 'Pie darkened his mind, stupefied his faculties, paralyzed his energy. Pie forced him to abandon a lucrative and honorable career for an unsuccessful whaling voyage to Cape Cod. Pie drove him into exile.' Pie deadened all the finer moral feelings, and ultimately drove him into the lowest depths of degradation. Beggared in pocket, broken in health, he deserted his wife and family, tried his fortune with unscrupulous politicians, sank lower and lower in the slough of vice, committed forgery, and was sent for ten years to the State prison. All owing to pie! 'I tell the tale as it was told to me,' says our contemporary's correspondent. 'It may read very like a burlesque; but there is a substratum of sad truth in it. The late illustrious Abernethy had a presentiment of the ravages which pie was making on the American constitution when he rebuked his dyspeptic patient from beyond the sea with the gorging propensities of his countrymen. Mexico is said to owe her ruin to the game of *Monti*; and if Columbia does not abate her fearful craving for pie, the very direst future may be augured for her.'

"The present civil strife in America is to be looked on as a hideous nightmare, produced by half-a-century's indulgence of an unhallowed appetite for pie: a nightmare which Mr. Tenniel has portrayed with terrific vigor in his recent cartoon, the American Juggernaut. Who does not shudder as the massive cannon, impelled by the Eumenides, rushes, in the darkening day, down the steep declivity, and crushes beneath its huge wheels the vainly struggling hosts! Never was a nobler lesson more forcibly depicted by the artist's pencil."

Is the number of the New York *Medical Times* published August 24th, a paragraph appeared, charging the President of the American Medical Association, Prof. N. S. Davis, of Chicago, with openly uttering the most disloyal and atrocious sentiments in a public speech delivered some months before. This paragraph having recently fallen under the eye of a professional friend, he addressed a letter to Dr. Davis, inquiring as to the truth of the statement. To this he immediately replied, denying it in the most indignant terms. He also stated that he had sent an equally explicit denial to the Editor of the *American Medical Times*, which was not received, however, until after the publication of that Journal had been suspended. The publisher promised to forward the denial for publication to the Philadelphia *Medi-*

cal and Surgical Reporter, and also to the Boston Medical and Surgical Journal. If sent to this office, we can only say it has not been received. In a recent number of the Philadelphia Reporter we find Dr. Davis's statement, as follows :—

EDITOR AMERICAN MEDICAL TIMES :—

SIR,—My attention has just been called to a paragraph in your paper of August 20th, 1864, headed "Disloyalty of the President of the American Medical Association." The paragraph is as follows :

"CHICAGO, June 20th, 1864.

"Our democratic friends have been in convention at Springfield during the past week. * * * * * The peace element prevailed, as one of the electors at large is Dr. N. S. Davis, of this city, who, in a public speech some months ago, 'thanked God that disease and battle were depleting our armies to such an extent, that the tyrant Lincoln would soon be powerless to wage war upon the rights and institutions of the South.'"

Your correspondent gives this as "one fact on which the grave accusation (of disloyalty) rests." As this so-called *one fact* seems to be all that your correspondents have been able to find, even in the anonymous correspondence of partizan newspapers, it seems almost a pity to spoil it. But truth and justice require me to say that a more inexcusable and libellous falsehood was never written. No such language or sentiment was ever uttered by me, on any occasion, either public or private.

The meeting alluded to was held in Bryan Hall, in this city, in the spring of 1863. In addressing that meeting, I alluded to the fact that several noted divines and leaders in the party supporting the administration had publicly "thanked God for the defeats of our armies, because they had brought the proclamation of emancipation," and denounced the sentiment as heartless and unchristian.

The next morning an unscrupulous partizan newspaper of this city represented me as having said just what I had actually denounced its own friends for saying. Such is the true origin of the paragraph furnished you by your disinterested correspondent "J. S."

Now, Mr. Editor, if any of your correspondents or readers are really anxious to know whether I am "loyal" or not, let them give an exact and concise definition of the word as they wish it to be understood, and I will inform them at once.

Yours truly,

Chicago, Aug. 8th, 1864.

N. S. DAVIS.

BERKSHIRE MEDICAL COLLEGE.—At the late annual commencement of this School, the exercises are spoken of as unusually interesting, and the graduating class, which numbered sixteen, as exhibiting the highest order of attainments for their calling. Two prizes were awarded for the best specimens of practical anatomy : one to F. J. Swift, of the graduating class ; the other to M. S. Chamberlain, of Brimfield, undergraduate. The annual address was on the "Errors and Delusions of the Medical Profession," and was delivered by Dr. O. S. Root. The diplomas were delivered to the graduates by the venerable founder and President of the College, Hon. H. H. Childs, M.D. At the commencement dinner, speeches were made by invited guests, several of the professors, and Dr. Gilbert, of the graduating class.

The following are the names of the graduates, their residences, and the subjects of their theses:—

Daniel D. Gilbert, Boston, Exosmosis and Endosmosis.

Charles L. Holt, Albany, Me., Dysmenorrhœa.

Marquis Hall, Brimfield, Pneumonia.

Wm. W. B. Green, Providence, R. I., Diagnosis.

W. H. H. Shepard, Warren, Gun-shot Wounds.

Henry J. Millard, Stamford, Vt., Phthisis Pulmonalis.

F. J. Swift, Wilmington, Vt., Duties of a Physician.

J. E. Norwood, Livingstonville, N. Y., Inflammation.

E. M. Whiton, Southport, Me., Diphtheria.

Frank K. Paddock, Hamilton, N. Y., Venesection.

G. A. Wilder, Circleville, N. Y., Intermittent Fever.

Cyrus Allen, Palmyra, N. Y., Stricture of the Urethra.

Henry Eastman, Pittsfield, Dysentery.

E. McCollom, Jr., Rochester, Vt., Retrospectus.

D. Sherwood Eckler, Athens, N. Y., Scarlatina.

E. Newton Beale, Spencertown, N. Y., Inflammation.

FOREIGN MEDICAL INTELLIGENCE.—A letter from M. Trousseau to the editor of the *Union Médicale*, explaining his reasons for resigning the chair of Clinical Medicine and returning to that of Therapeutics, contains the following passage:—

"The extreme facility of my address, and the clearness which is attributed to me, are perhaps natural gifts, but they were purchased with great labor. Every morning at six o'clock I am at work, and I return to it again on half my evenings. I regard clinical teaching as a very serious undertaking, and I wish to be acquainted with every new idea which is brought forward. This labor has endangered my eyes; I could no longer continue it without great risk of losing my sight. Accordingly, last August, I wrote to the Dean of the Faculty begging him again to lay my resignation before the Minister, being determined to appeal to the Council of State if I was refused. The Dean and several of my colleagues expressed to me their lively regrets on seeing me retire from teaching, in which I had as yet lost none of the favor of the pupils; and as the resignation of M. Rostan left his chair vacant, and as M. Grisolle, Professor of Therapeutics, passed to that chair, the chair of Therapeutics was thrown open, the Dean and the Minister expressed their wish that rather than quit the Faculty, I should resume a subject which I had taught for fifteen years with some success, and which required from me less labor. I consented to this proposal. I continue physician to the Hôtel Dieu, and I return to the chair of Therapeutics; and I hope that the few years of green old age during which I may be able to continue my instructions may not be useless to the youth of our schools. I should much have preferred repose, which I have gained a perfect right to; but I have felt compelled to yield to the wishes of the Dean, who is my excellent friend, and to those of my colleagues."

Professor Trousseau now counts thirty-three years of service in the Faculty, but he carries his sixty-three years with the ease of a man scarcely arrived at fifty.—*Edinburgh Medical Journal*.

Mr. James Spence, Senior Surgeon to the Edinburgh Royal Infirmary.

ry, has been elected Professor to the chair of Surgery in the Edinburgh University, rendered vacant by the death of Prof. Miller.

Among the elections to the new Belgian Parliament we notice the name of M. Vleminckx, Medical Director of the Belgian Army and President of the Academy of Medicine. It will be remembered that Prof. Virchow represents in a similar capacity the liberal party in Prussia.

M. Claude Bernard recently presented a memoir to the Academy of Sciences upon the physiological properties of opium and its alkaloids. Another active principle has been discovered, called narcein, which occupies a mean position in its soporific properties between morphine and codeine. MM. Debout and Béhier are engaged in an investigation of its action on the human economy, which will soon be published. We learn from Prof. Clarke that it is coming into extensive use in Paris.

The Medical Association of France is about to erect a statue to the memory of Laennec.

The old Hôtel Dieu of Paris is to be demolished, and the plans of the new hospital have been adopted. The building will be erected at a very little distance off the present site; and two streets will be considerably enlarged to afford space and frontage. The area to be occupied will be 22,000 square yards, the present hospital not occupying half that area.

ON LIFE TABLES CALCULATED BY THE SWEDISH CALCULATING MACHINE. By Dr. FARR.—In his remarks Dr. Farr replied to a question that had been put to him relative to the life-rate in this country, which was 40 years for males and 42 for females. Bath, he said, might be made one of the healthiest places in Somerset, which county was one of the healthiest in England. The mortality in Bath had been shown to be 25 males and 20 females per 1000 living of each sex, and, in the healthiest district, 17. Much was said about the salubrity of Italy. Now he found, from statistics, that the death-rate for Italy was 31 in 1000; Tuscany gave 32; the Neapolitan Provinces, 35; Sicily, 29; Sardinia, 29; Lombardy, 29; Piedmont, 28; Modena, 30; the Roman States, 30; Parma, 34; the Marches, 31; and Umbria, 27. It therefore followed that the duration of life in Italy was less than that in England. The Italians had not yet calculated the mean mortality of life, but the duration of life in Italy was about 30 years.—*Proceedings of British Association, in London Reader.*

LAUDANUM AND TEETOTALISM.—Dr. Alfred Taylor, commissioned by the Privy Council, has sent in a Report on the means of committing murder by poisons which are allowed to exist in England. He says that poison enough to kill two adults can be purchased anywhere for threepence; and that the careless dispensing of poisonous drugs is cause of most frightful accidents. As to landanum, it appears to be sold wholesale, single shops often in the Marshland supplying three or four hundred customers every Saturday night. Retail druggists often dispense 200 lbs. in one year, and one man complained that his wife had consumed £100 in opium since he married. It is a mistake to consider the practice confined to the marshy districts. We do not

believe there is a town in England where some one chemist does not on Saturday night load his counter with little bottles of laudanum; and we are assured by a wholesale druggist that he could and did sell it in the eastern counties to the extent of some thousands of pounds in a year. This gentleman, an old and keen observer, declared that the demand had sprung up shortly after the introduction of teetotalism, and that it would be found to vary everywhere, in accordance with the progress or decline of the system of total abstinence.—*London Spectator*.

A TRIBUTE TO THE JANITOR OF THE MEDICAL COLLEGE OF HARVARD UNIVERSITY.—A correspondent informs us that the Medical Faculty of the University have just presented to Mr. Wm. B. Andrews, the attentive and faithful Janitor of the College, a first rate chronometer watch, hunting cased and full jewelled, "Not so much as a hint of punctuality, for he is always 'up to time,' as a token of their friendly feeling and recognition of his merits."

BOSTON DISPENSARY.—We learn that there are two vacancies on the list of physicians to the Boston Dispensary—one for District 2, or East Boston, and the other for District 8, or South Boston. Candidates for the office can apply to the Secretary of the Board of Trustees, at No. 7 Court Square, room No. 21.

COUNT SCHWABE, of Germany, has generously furnished a new library and reading room to the Military Hospital at Readville. From three to five hundred of the books are taken out daily. Liberal supplies of newspapers are also gratuitously furnished the Hospital. Besides the generous donation of books made by Count Schwabe, handsome contributions have been made by others. Count Schwabe has also furnished a fine library for Dale Hospital, Worcester.

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, DECEMBER 3d, 1864.
DEATHS.

	Males.	Females.	Total.
Deaths during the week	40	49	89
Ave. mortality of corresponding weeks for ten years, 1853—1863.	41.1	39.5	80.6
Average corrected to increased population	00	00	88.26
Death of persons above 90	0	1	1

SUBSCRIBERS in a part of the New England States will receive their bills with the present number of the JOURNAL; others, with succeeding numbers. Those who have heretofore been annually called on by a Collector, are informed that no agent has been sent out the present season for that purpose, and they will therefore confer a favor by remitting to the publishers, either in the usual manner by mail, or by the new system of money orders through their postmaster.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 3d, 89. Males, 40—Females, 49.—Abscess, 1—accident, 1—apoplexy, 2—blood-poisoning, 1—disease of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 4—consumption, 15—convulsions, 5—diarrhoea, 1—diphtheria, 1—dropsy, 4—dropsy of the brain, 2—erysipelas, 1—scarlet fever, 3—typhoid fever, 3—haemoptysis, 2—haemorrhage, 1—disease of the heart, 4—infantile disease, 2—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—gangrene of the lungs, 1—inflammation of the lungs, 4—measles, 1—old age, 1—paralysis, 2—peritonitis, 1—premature birth, 2—smallpox, 5—sore throat, 1—unknown, 8.

Under 5 years of age, 20—between 5 and 20 years, 18—between 20 and 40 years, 23—between 40 and 60 years, 15—above 60 years, 13. Born in the United States, 62—Ireland, 24—other places, 3.